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ORIGINAL LECTURES.

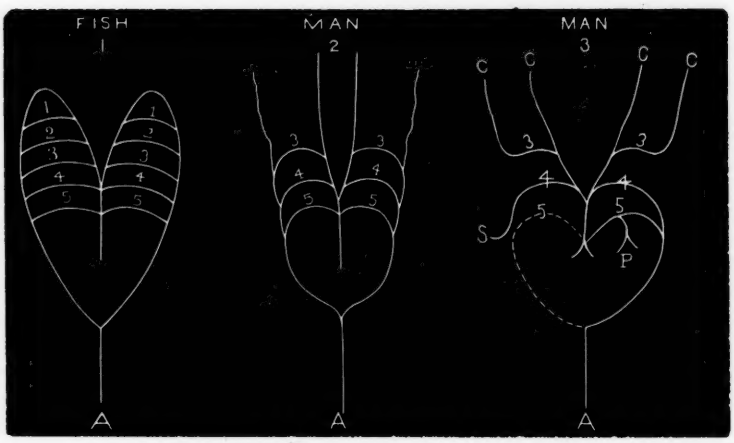
A LECTURE UPON THE EXPLANATION OF THE ANOMALIES OF THE CIRCULATORY APPARATUS, ETC.

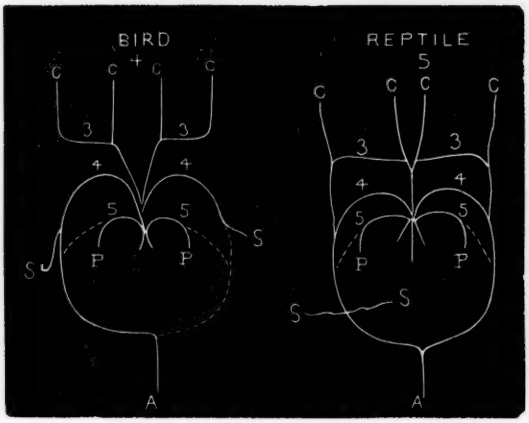
BY HENRY C. CHAPMAN, M.D.

GENTLEMEN,—Following what appears to be the logical method of study, that the simple and normal should be investigated before the complex and abnormal, I propose to give you to-day an *exposé* of the circulatory apparatus as exhibited in some of the orders of the animal kingdom, and a *résumé* of its development in man, with the application of such knowledge to the explanation of anomalies. The simplest kind of circulation seen in any animal is that of the Bryozoa, in which the space between the alimentary canal and body-wall is filled with a nutritive fluid. The vessels seen in more lowly organized forms of life, like the Planaria, Diatoma, etc., and which are often regarded as blood-vessels, seem rather to be excretory in their function, the simplest expression of urinary organs, and in their development and structure are different from the blood-vessels of the higher animals. More complex worms, like the Annelids, have, however, well-defined blood-vessels, inasmuch as they exhibit a dorsal and a ventral vessel lying above and below the alimentary canal, which are more or less in communication through lateral branches encircling the intestine. Advancing a step, the Ascidian Mollusk offers a further differentiation, a part of the vessel exhibiting a thickening, a muscular tube, which acts like a heart. The organization of the Fish exhibits a more marked advance, the heart proper consisting of two cavities, an auricle and a ventricle. The venous blood from the ventricle passes into the so-called bulbus arteriosus, thence through the bronchial arches, usually five in number, to the gills, where it is aerated; from there the blood passes into the two aortas, which unite to form the dorsal aorta. (Fig. 1.) The Batrachia, of which the common frog is a familiar example, furnishes the transition to the air-breathing vertebrates. In these animals a vessel is given off from the last bronchial arch, which conveys venous blood to the lungs; the blood after having been oxygenated returns to the left side of the heart, which consists of three cavities, a right and left auricle and a ventricle. In the early stages of its existence, the Frog aerates its blood both by gills and lungs, but as the latter are developed the former disappear. In some of the Batrachia, like the Menobranchus and Proteus, this double mode of aeration is maintained through life. It is also seen in the Lepidosiren or Mud Fish. It is interesting to notice that in the Lepidosteus or Gar Pike, the vessel supplying the air-bladder, which is very lung-like in its structure, is given off from the last bronchial arch, in fact is the homologue of the pulmonary artery of the Batrachia and higher vertebrates. Although the Reptilia agree with the Fish and Batrachia in having the two aortic roots, their circulatory apparatus is much more differentiated, the heart consisting of two auricles and two ventricles; the right ventricle giving off the left aorta and pulmonary artery, the left ventricle the right aorta. The septum between the ventricles is incomplete in all Reptilia except the Crocodilia, but in these as in other Reptiles the blood is always mixed, for in the Crocodilia there exists a communication between the two aortas immediately after they are given off from the ventricles. (Fig. 5.) Passing from the Reptiles to the Birds and Mammals, we find in Birds only the right aorta persisting, the left having disappeared in the course of development. (Fig. 4.) In Mammals, on the contrary, it is the left aorta which is developed. (Fig. 3.) In Birds and Mammals the venous blood is confined entirely to the right side of the heart, the arterialized to the left side. In Birds a pulmonary artery is given off from both of the last bronchial arches; in Mammals, from only one, the left.

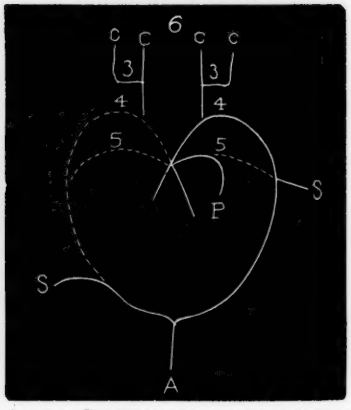
Having briefly called attention to the peculiarity of the circulation as seen in some of the different orders of animals, I will now turn to its development. There is no doubt that the heart in man, as in other vertebrates, develops from the ventral wall of the fore part of the alimentary canal, with which it remains for a short time in connection. So far as I know, however, the earliest condition of the heart yet seen in the human being is that described by Coste in an embryo of about two weeks

old, in which the viscus appeared as a simple tube in the shape of an S. At this stage of development, the heart may be considered as exhibiting a slight advance as compared with that of an Ascidian Mollusk. Between the third and fourth week of embryonic life, the fish-like heart is seen in man. The five bryonic life, the heart commences to exhibit the beginning of its future divisions, a longitudinal septum appearing; at first this is imperfect, but ultimately it divides the ventricle and auricle into the two permanent auricles and ventricles, and the bulbus arteriosus into the pulmonary artery and





ANOMALY IN HUMAN LUNG.



EXPLANATION OF LETTERS IN FIGURES.—1, 2, 3, 4, 5, bronchial arches; A, aorta; P, pulmonary artery; S, subclavian; C, carotids.

bronchial arches of the fish, however, do not co-exist at any one period in the human embryo, the first and second arches disappearing as the fourth and fifth develop. (Fig. 2.) The aorta, as in the fish, is formed by the union of the two aortic roots. It is important to remember that in an earlier stage there are two distinct aortas, the union of which forms the permanent dorsal aorta. The aortic roots in the fish, reptile, etc., are the remains of these originally distinct aortas. At about the fourth week of embryonic life, the heart commences to exhibit the beginning of its future divisions, a longitudinal septum appearing; at first this is imperfect, but ultimately it divides the ventricle and auricle into the two permanent auricles and ventricles, and the bulbus arteriosus into the pulmonary artery and aorta. The portion separating the ventricles appears about the fourth week, that dividing the auricles about the eighth week, the aorta and pulmonary artery being differentiated from the bulbus arteriosus between the fifth and eighth week. The blood is, however, of a mixed character until after birth, there being a communication between the auricles, the foramen ovale remaining open, and the ductus arteriosus between the pulmonary artery and the aorta being pervious. As development ad-

vances, certain of the arches persist, others atrophy, giving rise to the disposition of the great blood-vessels seen in the adult. (Fig. 3.) Thus, the left fourth arch remains as the aorta, the right fourth gives off the right common carotid and right subclavian, which approximating finally coalesce, forming the innominate. The left common carotid and the left subclavian, however, maintain their distinctness. The right fifth arch disappears, part of the left fifth becomes the pulmonary artery and the remaining portion constitutes the ductus arteriosus: the third arches go to form the internal carotids. While in the Mammal it is the left fourth arch which remains as the aorta, in the Bird, on the contrary, it is the right fourth arch which persists. In the Reptile, both the arches are retained; in some of them, as in the Lizard, the external communicating branches connecting the third and fourth arches also persist. (Fig. 5.) Primitively, the structure of the heart and the bronchial arches are the same in the Fish, Batrachian, Reptile, Bird, and Mammal; but as development advances they exhibit the characteristic differences of these orders. It may be also stated that in a general way the permanent arrangement of the lower forms gives a very good idea of the transitory phases of the higher ones. Remembering that the difference exhibited by vertebrate animals in their circulatory apparatus depends upon the atrophy or development of certain parts, let us see whether the suppression or persistence of these parts will not furnish us in a great measure with an explanation of some of the well-known anomalies. These anomalies may be conveniently thrown into three groups, as suggested by Prof. Turner (*British and For. Med.-Chirurg. Review*, 1862). 1st. Those of the heart and the truncus arteriosus. 2d. Those of the fourth arches and aortic roots. 3d. Those of the branches coming from the fourth arch. It must be remembered that often individuals are found who are illustrations of all three kinds of anomalous arrangements. As examples of the first group, cases are on record, differing more or less in detail, but which agree in the heart consisting of a single auricle and ventricle with a single trunk coming from the ventricle, and either at once giving off vessels to the lungs, and then continuing as the aorta, or at once splitting into aorta and pulmonary artery. Cases of this kind are illustrative of arrested development, the heart in these beings never having got beyond the fish or batrachian stage of organization. In this group may be also placed the numerous cases in which the septa between the auricles and ventricles and pulmonary artery and aorta are incomplete. According to the amount of the deficiency in these septa, the period in embryonic life at which the arrest of development has taken place can be pretty well established. Simple transposition of the heart and aorta, etc., to the right side of the body, the normal relations in other respects being preserved, becomes intelligible when it is remembered, as was first pointed out by Von Baer, that usually the embryo rotates so that it lies upon its left side in relation to the yelk, and so that the heart is pulled by the vitelline vessels to that side; if the embryo, however, rotates to the right side, then the heart will be ultimately found on that side. This anomaly is a simple case of transposition. Let us turn now to the second group, where there is an irregular development in the fourth arches and the aortic roots, of which there are several varieties. Thus both the fourth arches and aortic roots may persist, and then we have the human heart exhibiting a reptilian type of circulation. Or the right fourth arch, right aortic root, and left aortic root may persist, but the left fourth arch atrophy, and then we see the bird-type developed. Sometimes the left fourth arch disappears, and the aorta is formed out of the left fifth arch, the ductus arteriosus remaining open and forming the communication; or the right fourth arch may disappear, but the right aortic root persist and give off the subclavian. (Fig. 6.) Lastly, the aorta has been seen to be divided by a longitudinal septum, recalling the original distinctness of the two aortas.

The third group of anomalies—those in which there is an irregular development of the carotids and subclavian arteries—are also illustrative of abnormal dispositions in man, which are normal in the lower animals. Thus, we find occasionally in the human being: 1st, the innominate artery giving off the two common carotids and right subclavian, as is seen normally in many monkeys; 2d, a common innominate, from which arise the subclavians and carotids, as in ruminants; 3d, a right and left innominate giving off for their respective

sides the carotid and subclavian, as in bats; 4th, a right subclavian coming from the aorta; a trunk giving off both common carotids; and a left subclavian arising distinctly from the aorta, which arrangement is normal in the elephant; 5th, the subclavians and carotids being distinct in their origin, the natural disposition in the Cetacea. Other varieties have been recorded as occurring in man, which combine more or less these peculiarities. They can all be explained by remembering that the development is primitively the same in all animals, and that the ultimate arrangement is due to the original distinctness being lost through approximation and fusion of the vessels. The innominate artery in man, for example, arises in this way. The right subclavian at first is some distance apart from the right common carotid, but by the shortening of the fourth arch they lose ultimately their original distinctness. This process takes place in the left fourth arch of bats as well as in the right fourth arch, and so we have ultimately in these animals two innominates. In man there has been seen a left innominate instead of a right; in this case the left fourth arch shortened instead of the right. Many other examples of this kind might be given, but time fails us, and I must content myself with mentioning that the abnormal distribution of the veins can be explained in exactly the same way. Thus, there has been found in man as a rare anomaly a left superior vena cava as well as a right terminating in the coronary sinus. This disposition is seen in the human embryo and in Rodents, Marsupials, Birds, etc. As development in man advances, the left innominate vein appears, and the left vena cava atrophies, the coronary sinus being the remnant of it. Irregularities in the inferior vena cava and the azygos veins, etc., become quite intelligible when their development in man and their normal arrangements in the lower animals are known.

LOCAL USE OF COLD IN ABDOMINAL INFLAMMATIONS.—Dr. Peter Eade, in the London *Lancet* of February 26, narrates several cases of enteritis, peritonitis, in which the greatest advantage was obtained from the use of cold to the abdomen, as recommended by various authorities, and especially Niemeyer.

ORIGINAL COMMUNICATIONS.

THE STUDY OF OBSTETRICS, GYNÆCOLOGY, AND DISEASES OF CHILDREN IN EUROPE.

BY G. WILDS LINN, M.D.

THE large cities abroad, as at home, furnish the highest advantages for clinical study; universities situated in the smaller towns being chiefly valuable as centres of didactic instruction. Even Scanzoni's clinics are scantily supplied with patients, and operations of any magnitude are of rare occurrence, because the university to which he is attached is in a small city, Würzburg. A large city may have its many hospitals scattered over so immense an area that the student cannot avail himself of the advantages they offer. Such is the case in London, where students are compelled, for this reason, to confine themselves to that hospital-school in which they may have matriculated.

The hospitals of Paris and Berlin are also widely separated. The student who attends a lecture at the Hôtel-Dieu has an hour's ride by coupé or omnibus to the Hôpital du Midi, or Lariboisière; or if at the Charité in Berlin, the same time is necessary to reach the Bertanien or Augusta Hospital.

The system of private instruction in vogue in most of the large schools on the continent is invaluable to students, but it has not yet been adopted in England.

At Berlin, obstetrics is represented by the "Königl. Entbindings Institut," long in charge of Professor Martin. It contains only about twenty-five beds, and, as might be inferred from the number, offers but little inducements to the student of obstetrics. A department in the Charité is assigned to obstetrics; but it does not average more than twenty patients, who are divided among the students in attendance, as at the lying-in hospital already mentioned. Cases are "booked" in the dispensaries, and placed in the hands of students for attendance.

As might be anticipated, Leipsic possesses no superior advantages. Its university, which in number of students rivals that of Berlin, has for its obstetrical department a very fine building, well adapted to its purpose, but small. It is under the superintendence of Credé.

Munich is worthy of mention, both on

account of the size and importance of its university, and the great care taken, and expense incurred, in building a lying-in department which should be a model institution of its kind; but here, as at Leipsic, a limited population can supply but a limited number of patients.

At Vienna there are now three distinct professorships of obstetrics, occupied according to seniority by Carl Braun, Ritter von Fernwald; Joseph Spaeth; and Gustav Braun. Each of these has his special division of the lying-in department of the hospital, and each his own lecture-room adjoining the wards (for everywhere abroad the lecture-rooms are within the hospital walls); and each lectures five days in each week, two hours being the time devoted to each lecture, though professors generally avail themselves of the "*academische viertel*,"—a quarter of an hour's tardiness, which custom has made excusable in them. The course of lectures delivered by Professor Spaeth is systematic but largely elementary, and embraces everything commonly supposed essential to a knowledge of obstetrics. That of Carl Braun is intended for practitioners and advanced students, and hence minor points generally are omitted, and the more important topics discussed as they are suggested by cases occurring in the wards. Gustav Braun lectures only to women preparing themselves as midwives, and the material of his wards is devoted to their use. All that is in the wards of Carl Braun and Spaeth is under the observation of the student. More than six thousand births occur annually in the three departments. The name of each student is registered, and he is assigned certain days each week for practice. The working day begins at two o'clock P.M., and from that time until the following day, at the same hour, the students assigned assume charge of the patients. On other days they may always be present as observers. A room adjoining the wards is intended for the accommodation of all who wish to remain over-night. In the absence of any student having charge of a case, one of the hebamma (of whom there are five in each department) assumes charge. In case of mal-presentation or other difficulty threatening danger, the assistant accoucheur is called, and, under his superintendence, the practitioner may perform any operation necessary. I say practitioner, because such a large number of those attending lectures and the practice of the wards are physicians,—many of them of much experience, and a large proportion foreigners, representing many nationalities. Many cases of unusual interest are removed to the lecture-room, and the operation necessary is performed in the presence of the class. Such are of frequent occurrence, as may be inferred from the large number of patients. All are required to remain in the hospital ten days after confinement, and the student has the privilege of seeing them daily at the morning and evening visits of the assistant accoucheur.

It may be very pertinently asked, "Whence come so many patients?" for it would be impossible in our country, and with our civilization, to bring together such vast numbers. Two reasons may be assigned for this. First, the standard of morality among the people is exceedingly low,—so low, indeed, that a domestic who retains her chastity for any length of time is considered a marvel of good morals. Advertisements are daily to be seen in the principal newspapers emanating from some one who desires to live with another of the opposite sex as companion or housekeeper, etc. Some idea may be formed of the extent to which the "social evil" prevails in Vienna, when statistics show that, of 27,000 births in 1875, 11,000, or more than forty per cent., were illegitimate.

In the second place, the government would seem inclined to place a premium on laxity of morals in this respect, by making provision for the admission to the wards of all pregnant women from all parts of the empire gratis, and in not requiring them to assume any responsibility for the care of their offspring. They are removed, if the mother request it, to the "Findel Anstalt" (Foundling Asylum), which, in this respect, belies its name. Here they are kept if deformed or diseased, but all healthy children soon find their way into families, generally in the country, who are allowed a certain sum by the government for their adoption and care.

During both winter and summer semesters the assistant accoucheurs deliver lectures upon operative obstetrics. In all cases the operations are performed upon the cadaver, the large number of deaths occurring in the hospital (I do not now refer to the obstetric department alone, where the mortality is only one and one-

half per cent.) making it an easy matter to procure all the material necessary. Here the instruction received in the lecture-room and hospital wards is reiterated, and *each student* in turn performs all the operations which the art of obstetrics recognizes.

Prague, next to Vienna, offers the greatest inducements for the study of obstetrics. The system of teaching is precisely similar to that of Vienna. A number of rooms are furnished for the use of students, so that those who wish to remain permanently near the wards can be accommodated. They can be obtained at very moderate charges, and the student is near enough to be summoned to any case of interest. The number of births in the lying-in department is about four thousand annually.

The Maternité (the large lying-in hospital of Paris) is closed against male students, and the patients outside of that are far too few in number to offer much of interest for the obstetrician.

London has no great obstetric hospital, and the student is compelled to attend almost entirely on cases booked in the public dispensaries, and which must be attended at their own homes, generally widely distant, scattered far apart, and only to be seen at great expense of time and trouble. Lectures on obstetrics are delivered in the schools, except during the spring and summer sessions.

In no school or hospital, that I am aware of, in this country or Great Britain, has there been adopted any plan by which those who desire to pay special attention to gynæcology can be accommodated.

How can any one arrive at any skill in the diagnosis of thoracic diseases without practice in percussion and auscultation? And with as little reason can it be supposed that a student can become familiar with abnormal positions and conditions of the uterus without digital or manual examinations. The large number of students and the paucity of patients with us prohibit that instruction, which alone is really of a practical character. This difficulty is obviated in the schools on the continent, especially in the large cities, by the system of private instruction, to which I have already referred. The dispensary clinics are conducted by men appointed by the universities and empowered by them to give instruction to students. They limit the number of hearers generally to ten, and the course of instruction lasts for six weeks or two months, when a new class is formed. These courses are entirely independent of those given by the regular professors, to whom all cases demanding serious operative interference are sent. By this means every student who desires practical work, in addition to the usual instruction by the professors, can be accommodated. Although an average of thirteen hundred students are in the medical department at Vienna, they are so divided among different professors, and the duration of the university course is so long (five years), that but a small number comparatively meet in the same class-room, and of these but a small percentage make gynæcology a special study. Indeed, the major part of those taking private instruction are graduates. Here each one has a daily opportunity of examining for himself every case presented at the clinic, and noting the progress of the treatment instituted.

In addition to these, two courses are also established for instruction in *operative* gynæcology, in which each member of the class does on the cadaver all the operations the gynæcologist is called on to perform, from simple hysterotomy to ovariotomy. In connection with these latter courses are lectures upon the various methods used by different operators. Possibly nowhere else in the world than in the immense hospital of Vienna could two such courses be conducted simultaneously, because of the vast amount of material necessary.

Professor Carl Braun delivers lectures upon gynæcology in conjunction with those upon obstretrics, but they are almost purely clinical. His reputation and connection with the hospital and university bring great numbers of patients from all parts of the empire, so that his clinic has great popularity among the students.

C. Braun, Breisky of Prague, Susion of Heidelberg, Scanzoni of Würzburg, Schroeder of Erlangen, Martin of Berlin, and Speigelberg of Breslau have been considered the principal gynæcologists of Austria and Germany. The death of Professor Martin some weeks ago has made a vacancy not easily supplied. He was a bold operator; and, though his style as a lecturer was not very clear or forcible, he gained many friends among the students by his honesty and constant attention to his duties.

Chrobak of Vienna is the best teacher of gynæcology I have heard, although he is

not much known away from home, partly on account of his age, about thirty-seven, and partly on account of his intense occupation in practice. He is now on the staff of instructors in the university.

One would suppose that London would be a rich field for the gynæcological student, possessing such lights as Barnes, Hewitt, Meadows, Hicks, Wells, and Greenhalgh. This is, however, unfortunately not the case. The lectures delivered and clinics held by these men are far too few in number for the special student, and, as I have said, the hospitals are so widely separated that the instruction and practice of more than one cannot be followed.

Distinct professorships have been created in all the larger universities abroad for instruction in children's diseases. No city in Europe rivals Vienna in the opportunities it offers for study in this respect. Besides the department in the general hospital devoted to that purpose is the Foundling Asylum with two hundred beds, the Children's Hospital with sixty beds, and a dispensary service averaging twenty patients; and within five minutes' walk of the general hospital is the Poliklinik, with its department for *Kinderheilkunde*, where thirty patients per diem are presented for treatment. At all of these places instruction is given. At the Children's Hospital and at the Poliklinik respectively, Professor Wiederhofer and Dr. Alois Monti lecture daily. I have heard no one who lectures on diseases of children with the clearness, conciseness, and enthusiasm of Dr. Monti. Though yet a young man (an Italian by birth), he has attained a wide reputation, and his abilities are of the first order. With a mind of rare analytic and synthetic powers, difficulties in diagnosis vanish before him, and diseases the most obscure are made to stand out in bold relief.

The usual fee accorded professors throughout Germany is ten thalers (equal to about eight dollars in currency). This gives admission to a course of lectures for one semester. In Austria ten florins (equal to five dollars currency) is the customary fee. Rates generally much higher than these are charged by the private instructors, ranging from fifteen to thirty florins. In Paris, admission to the lectures of regular professors is gratis, while in London one hundred guineas are charged for a full course on medicine or a perpetual ticket. Where the student desires to attend lectures on certain branches only, a fee varying from three to six guineas is charged for each professor.

An erroneous impression is almost universally prevalent that boarding and lodging can be obtained much cheaper abroad than in America. The medical student can obtain accommodations in Philadelphia or New York at prices as moderate as he can in Berlin, Vienna, Paris, or London. Since the Franco-Prussian war, everything has much increased in price. Clothing everywhere, and books and instruments in some places, may be obtained at cheaper rates, but that which constitutes the burden of expense, boarding and lodging, costs as much as at home. The custom prevailing everywhere abroad of securing a room entirely independent of meals (unless breakfast be excepted, which consists only of a couple of rolls with coffee) enables the student to limit his outlay at the café or restaurant very much if he is so disposed. The German student of limited means, accustomed to what an American would esteem very low diet, is satisfied with soup and vegetables alone for dinner, taking meat probably once a week, and for his supper will eat a piece of sausage with *schwarzbrod* (black bread), which is always accompanied by a seidel of beer. If the American is willing to adopt such a mode of life, he may reduce his expenses very much below what they ordinarily are at home. The expense of living in the different cities named varies but little. Vienna is probably the most expensive city on the continent for the student, though Paris is generally supposed to be.

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EPILEPTIC CONVULSIONS, FOLLOWING SUDDEN SUSPENSION OF A LONG-CONTINUED HABIT OF OPIUM-EATING.

BY SAMUEL C. BUSEY, M. D.,

Washington, D. C.

ON June 16, 1875, I was called to see Mrs. D., aged 74, a large, portly woman, who had for many years enjoyed good health, excepting a severe attack of bronchitis four or five years ago, and, more recently, had suffered from a recurring affection simulating biliary colic, from which she had, apparently, entirely recovered. The habit of opium-eating had been contracted thirty years previous,

in consequence of the intense pain incident to some uterine disorder for which she had been successfully treated. She consumed daily ten grains of the sulphate of morphia.

She was taken sick about 10 A.M. (16th) with pain in the limbs, general malaise, chilliness, slight looseness of the bowels, and nausea. At the time of my first visit, 7.30 P.M., she was suffering with intense nausea, diarrhœa, stools very copious, dark and fluid, skin was hot, pulse accelerated, intense pain at the epigastrium and in the dorso-lumbar region; had vomited several times during the day. Ordered ice, an effervescent draught, a sinapism to the epigastrium, and hot poultice to the dorso-lumbar region, thirty grains of the subnitrate of bismuth every three hours.

Soon after I left the house she was seized with a violent convulsion, and was seen immediately by Drs. Mackall and Peters, who ordered twenty grains of the bromide of potash every two hours. I saw her again at 10 P.M., and remained with her until 5 A.M. 17th. The convulsions appeared at intervals not exceeding one hour, were immediately preceded by increased nausea, and occasionally vomiting, a wild scream, great jactitation, constant violent movements of the right arm, and a copious gush of dark, watery, stinking fluid from the bowels, which always continued to pour involuntarily through the anus during the entire convulsive seizure, though not in so large and forcible a stream as immediately preceding. During the seizure her face became deeply congested, of dark purple hue, breathing slow and somewhat stertorous; she frothed at the mouth; her temperature rose from one to one and a half degrees; consciousness was completely lost, sensibility always diminished, generally entirely absent. During the first few intervals consciousness partially returned, but subsequently she remained entirely unconscious and insensible, with contracted and insensible pupils, and for several hours there was a continuous stream of fluid, of the same character as before described, flowing through the anus.

I doubled the dose of the bromide, and repeated it at intervals of two hours, until eighty grains had been taken, without any manifest effect. Astringent injections proved unavailing, flowing out immediately. At one A.M., 17th, I administered twenty grains of chloral hydrate, and repeated the dose at three, with the effect of prolonging the intervals and diminishing the intensity of the convulsions. Feeling assured that she had taken no morphia since the commencement of her sickness (ten A.M., 16th), and having been informed by the attendants that she had taken none during the past twenty-four hours, I administered, at five A.M., 17th, hypodermically, half a grain of the sulphate of morphia. The convulsions ceased.

At ten A.M., 17th, saw her again in consultation with Drs. Mackall and Peters. She was then slumbering in complete unconsciousness and insensibility, with a full and compressible pulse. Had had several very copious evacuations from the bowels, but the continuous discharge had ceased; could swallow, and had taken ice-water in small quantities whenever offered. Ascertaining then, for the first time, that her accustomed daily consumption of morphia reached ten grains, though the habit had been long known to me, and suspecting that the single factor of causation might lie in her self-imposed abstinence, we ordered one grain of the sulphate to be administered, per orem, every hour; beef-tea, if retained, and the subnitrate of bismuth in thirty-grain doses every three hours. I visited her frequently during the day, and in consultation with Drs. M. and P. again at six P.M. The improvement was progressive and rapid, and when ten grains of the sulphate had been taken, in as many successive hours, convalescence was completely established. Her restoration to health was rapid and complete in a few days, has continued uninterruptedly good since, and she is to-day (January 28, 1876) hale, hearty, robust, and well; enjoying, even under the adverse conditions of her pernicious habit sedulously adhered to, a degree of good health and physical vigor remarkable for one of her advanced age.

Remarks.—I shall not attempt any physiological explanation of the symptoms, but suggest that the abstinence from the long-accustomed influence of the narcotic was quickly followed by paralysis of the sympathetic and vaso-motor nerves of the brain and alimentary tract, eventuating in profound congestion of those parts, so that the singular concatenation of symptoms—one series relating to intercranial disturbance, and the other to the alimentary tract (the latter exhibited, however, in a form unusual in similar conditions of the brain)—is attributable to the co-ordinating operations of a single factor expressing themselves in the determination of blood to parts anatomically remote from each other: in the brain, giving rise to the symptoms of irritation and pressure; in the gastro-intestinal tract, to a continuous and copious defluxion and consequent diminution of the mass of blood. It may be that the loss of so large a quantity of fluid, stopping short as it did of producing inspissation and thrombosis, constituted the chief and essential element of the reparative process.

The primary symptoms simulated those usually exhibited in the onset of an ordinary malarial chill, and were probably accompanied with the usual turgescence of

the abdominal viscera which marks the cold stage of such fevers, and were followed by the augmented febrile phenomena and paresis of the superficial capillaries, which differentiate the subsequent stages of malarial fevers. The palliative treatment instituted at my first visit was based entirely upon the hypothesis of malarial disease,—the administration of quinine being deferred because of the gastric irritability. The administration of a full antipyretic dose might, perhaps, have lessened the temperature, and thus have eliminated its influence in hastening the convulsions, but it is not probable that it would have prevented the subsequent and quickly-ensuing alarming condition. The free exhibition of ergot would seem to have more quickly and completely fulfilled the indications and restored the equilibrium of the blood-circulation. The employment of the chloral is open to criticism, and the good effects apparently attributable to it were more probably the remote effects of the bromide, of which one hundred and twenty grains had been taken.

Mrs. D., during her earlier life, had been slender and frail, but, during the continuance of her habit, grew very large and fat, and had always been blessed with a good appetite and vigorous digestion, never suffering from either a loss of appetite or constipation,—the most usual and immediate ill effects of opium-eating.

It would seem that opium-eaters are divisible into two classes:—the larger class growing thin, withered, and sallow; the other never losing, perhaps gaining, flesh and fat, and preserving their color, health, and vigor. These opposite conditions may find their explanation in the presence or absence of a good appetite and vigorous digestion.

INTESTINAL OBSTRUCTION.

TREATMENT BY OPIATES AND INJECTIONS—GREAT RELIEF FROM USE OF THE GALVANIC BATTERY—RECOVERY.

BY R. G. WHARTON, M.D.

APRIL 18, 1875, visited Mrs. McK., at 6 A.M. She had been suffering all night with violent pains in the abdomen, around the edge of the ribs, and in the right scapula. Mrs. M. is nearly 60 years of age, is very delicate, has had Bright's disease for several years. She ate a hearty dinner yesterday, was taken ill a few hours after, and vomited undigested food in the night. I found her very ill, restless, nauseated, and in great pain. Gave a hypodermic injection of one-fourth grain of morphia, with one-sixtieth grain of atropia, and ordered a dose of salts to be given as soon as the stomach should be quieted. She vomited the salts, but was relieved of pain for several hours. At 4 P.M. there was return of pain, some fulness of abdomen, nausea, pulse 125. Repeated the dose of opiate and atropia, and ordered another dose of salts.

19th.—Found her very ill, vomited the salts ordered last evening; passed a very bad night, in great pain; abdomen tympanitic; no action of bowels; no escape of flatus; abdomen quite tender over caput coli; a tumor to be felt there. I diagnosed obstruction, most probably from impacted fæces. Ordered fomentations to the abdomen; gave the morphia and atropia as before, and ordered enemata to be administered every few hours. *Evening:* the enemata could not be retained, on account of the great swelling of abdomen, which was increasing; pulse 120; very restless and sore on least motion; to relieve the pain gave another opiate.

20th.—The patient no better this morning; was tolerably easy from the opiate during the night, but, as its effects have passed away, complains very much; pulse 120; mouth dry; nausea; very weak; abdomen still larger; gave iced water to drink, but the distention was so great that she could take only one or two teaspoonfuls at a time. As the enemata could not be retained even one minute,—in fact, they were forced back immediately,—I tried the galvanic battery, in the hope of stimulating the peristaltic action of the bowels. Introduced a metallic bulb connected with the negative pole into the rectum, and applied the wet sponge of the positive over the tumor on the right side. Used fourteen cells, and for ten minutes, making second interruptions with the current changed. In a short time some flatus escaped under the flow of the current, and with very great relief; the pulse was reduced to 106; she felt much better. Two hours afterwards I used the battery again, with still more relief; escape of more flatulence. I then had an enema of iced water administered, which brought away some hardened fæces, and with much flatulence. I now gave the hypodermic injection of one-fourth grain of morphia, and one-fortieth grain of atropia, as she was beginning to get very restless. At 9 P.M., had another cold enema administered, which did not bring any fecal matter, only the water was a little stained. Gave another opiate.

21st.—Passed a better night, and as the effects of the opiate taken last night have passed off, she is beginning to suffer very much; cannot bear the least motion of body; complains very much of pain; pulse 110.

Gave the hypodermic of morphia and atropia, at 8 A.M., and ordered the iced enemata to be repeated several times during the day. They served to refresh her, to cool the bowels, and to quiet the nervous system. *Evening:* no action as yet; the injections come away a little colored; has taken a few teaspoonfuls of iced milk to-day; repeated the opiate at night, and cold enema afterwards.

22d.—Passed tolerable night; complains of great weakness; pulse 105. The effect of last opiate has worn off, and she begins to suffer very much; repeated opiate and atropia, and ordered the administration of the enemata during the day, and to take iced milk. Passed some fecal matter twice during the day, with great relief; less soreness; less distention; another opiate at night.

23d.—Found her very weak, but the abdomen less distended; pulse 115, and very weak; passed a little fecal matter in the night. Another opiate, to be followed by enema. Passed some fecal matter in the evening. Another opiate at night.

24th.—Much better; less distention; less soreness of abdomen; pulse 98. Another opiate, to be followed by enema, which brought away quite a free evacuation; opiate at night.

25th.—Still better; in fact, she is now convalescent; reduced the opiate to one-sixth grain of morphia; gave iced milk to drink, of which she took a good quantity, and from this time convalesced slowly, and in the course of a week was tolerably well again, but felt sore on the right side of the abdomen for several days longer.

Remarks.—The good effects of the battery were very evident in this case, and the first indication of any relief was from its use. Its tonic action, enabling the bowels to expel the flatulence which paralyzed their action, was plainly to be observed, and it was only after its use that the enemata could be retained. The iced water also afforded great relief, as there were signs of approaching inflammation in the impacted bowels.

PORT GIBSON, March 11, 1876.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by J. B. ROBERTS, M.D., Resident Surgeon.

EXSTROPHY OF THE BLADDER; NEW METHOD OF OPERATING BY FORMING A PERINEAL URETHRA, AND COMPLETE CLOSURE WITH SCROTAL FLAP.

A BOY, aged 13 years, was admitted with the congenital malformation of the bladder called exstrophy. The case was typical, although there was not the protrusion of the posterior wall of the bladder that is usually seen. In this instance the bladder, on account of the absence of the anterior wall, formed a little cup at the root of the penis, about large enough to admit the end of the thumb; this was always filled with urine, that constantly flowed over the edges and down upon the thighs. The mucous membrane as well as the skin surrounding the bladder was very red, and, when the penis was depressed, the orifices of the ureters could readily be seen.

The penis was rudimentary, being about one inch long and flattened; the prepuce and glans were imperfect, and along the top of the organ was a groove in which could be seen the caput gallinaginis. The scrotum was small, and the testicles situated just above and partially descended into it; on each side there was an inguinal hernia, which caused a tumor immediately above the testicle. The symphysis pubis was imperfect, as the ends of the pubic bones were separated about one and a half inches.

There was no umbilicus, but a cicatricial appearance of the skin at the upper edge of the bladder indicated the point where the umbilical vessels had emerged in fœtal life.

The patient, whose gait was of a peculiar waddling character, was very pale and anæmic.

The condition of exstrophy of the bladder is quite infrequent, but there happened to be a second case, a man aged 36, in the hospital at the same time with this boy; in his case the posterior wall of the bladder protruded and formed a tumor as large as a child's closed fist. In order to prevent his clothing irritating this tumor he wore a cloth skirt instead of trousers, and placed over the pubic region a hoop to keep the skirt from coming in contact with the delicate mucous membrane. Under the perineum he had a cup arranged to collect the urine as it ran over the genital organs; but he could not wear this continuously, and then the urine dropped on the floor as he walked about. He was in good health, had a hale appearance, and had worked as a farmer during part of his life. He had been married five years; had erections, during which the penis was about two inches long, and could have imperfect connection with his wife, but had no children.

The man was unwilling to subject himself to operation, but the boy was sent to the hospital to have something done to alleviate his condition.

The operations for exstrophy, which can at best only palliate, have for their object to prevent protrusion of the bladder, and to enable the patient to have some method of preventing the dribbling of urine upon his person. It has been proposed to establish a drainage from the bladder into the rectum by means of an artificial sinus; but the attempts

have not been successful; and most of the operations done have but partially covered the exposed bladder, after the protruding wall has been replaced, and then the urine passes out at the root of the penis.

In this case Dr. Levis determined to try a new method, the first step of which was to establish an artificial urethra from the bladder to the perineum, through which the urine might run into a receptacle fitting the perineum; the second, to create a complete enclosing anterior wall for the deformed bladder. To accomplish the first object, a long needle carrying a stout wire was pushed through the base of the bladder and brought out behind the scrotum. The wire was left in the tissues, and in the course of a couple of weeks a small gum bougie was forced through the track alongside of the wire. A few days afterwards it was noticed that some of the urine was escaping by the perineal urethra, as it may be called, along the sides of the bougie; and at the same time the skin of the abdomen around the bladder became paler, because it was not irritated as formerly by the constant contact of urine.

Every few days the bougie was removed and a larger one put in its place, until in two months the calibre of the sinus was about half an inch and all the urine escaped through this perineal urethra.

The long duration of the preliminary treatment was due to the feeble health of the patient, for during this period the boy was kept on a liberal diet and tonics.

When this free drainage from below was established, the whole of the bladder could be covered by a plastic operation, which was favored, moreover, by the fact that there would be little tendency for the urine to become infiltrated between the flaps. The method of operating by scrotal flap was devised by Dr. Levis a number of years ago, and has been more recently employed by other surgeons with success.

A large semicircular flap was made from the scrotum and the skin covering the herniæ; this was turned up over the bladder, leaving the testicles and hernial sacs exposed, so that the rudimentary penis was turned inward upon the bladder, for it was decided to leave this organ completely inside the flap. From the extremities of the first incision a curved incision with its convexity upwards was made, and a flap with a concave edge dissected up for about one inch towards the ensiform cartilage. Under this second or concave flap was put the convex edge of the turned-up scrotal flap like a "tongue and groove," thus giving apposition of two raw surfaces. These flaps were held in position by two rows of sutures, the upper row being twisted over small disks of metal. Before the sutures were inserted, however, a gum catheter having a number of holes cut in its side was passed up through the perineal artificial urethra until the end entered the bladder; this was left in this position to conduct the urine away as fast as secreted, and thus avoid infiltration under the flaps. The surface of the turned-up flap, the testicles, and the hernial sacs were left to granulate, and dressed with carbolized oxide of zinc ointment.

The urine flowed from the end of the catheter that projected through the perineal urethra, and the surface of the flaps assumed a healthy appearance; but the patient had a good deal of nausea and vomiting, and finally threw up a long lumbricoid worm. On the ninth day the catheter was withdrawn, lest the end should cause ulceration of the flap from internal pressure; but, as the sinus showed a tendency to close and the urine began to leak between the flaps, it was again introduced.

On the twelfth day after the operation the boy died very suddenly in the night, without having presented any especial symptoms except the occasional occurrence of vomiting. This vomiting had, however, interfered a good deal with the administration of tonics and the taking of nourishment.

At the autopsy there were found no signs of peritonitis, which was feared on account of the thinness of the abdominal wall in the median line, where the recti muscles were widely separated. There was a good deal of burrowing of pus around the flaps; but no sloughing of the parts was apparent. There were ante-mortem clots in the cavities of the heart, which were probably the immediate cause of death.

TRANSLATIONS.

ACUTE ATROPHY OF THE LIVER IN A CHILD AGED TWO AND A HALF YEARS (Dr. H. Rehn: *Berl. Klin. Wochensch.*, No. 48, 1875).—This child was first seen by R. on the 3d of March, and had, according to the statement of the mother, suffered with loss of appetite, diarrhœa, etc., for about a week. Upon examination, moderate icterus of the skin and all the visible mucous membranes was found to exist; the temperature was not elevated, the urine very yellow, and the stools badly formed and gray in color. The case was supposed to be one of ordinary gastro-duodenal catarrh, and was next seen two days later, when all the symptoms noted above were found to have increased in severity. An examination of the liver, which was made on the 7th, showed that there had been a marked diminution in the size of that organ since the 5th. The condi-

tion of the child soon became alarming, and death occurred early on the 8th. At the post-mortem examination, the gall-bladder was found to be moderately filled with a fluid looking almost like pus, which was of tough consistency and of a grayish-yellow color. The long diameter of the liver was fourteen centimetres, and its weight two hundred and thirty-one grammes. The urinary bladder was distended with clear yellow urine, which was found on examination to contain neither leucin, tyrosin, nor biliary acids, while biliary pigments were present in considerable quantity. W. A.

INHALATION OF AIR BY THE CHILD DURING BIRTH (E. Hofmann: *Centralblatt für die Med. Wissenschaften*, No. 52, 1875).—A case is reported in which, owing to the premature escape of the waters during a difficult and protracted labor, air made its entrance into the uterus, and the fœtus inhaled both liquor amnii and air. The child was delivered dead, and an examination showed the presence of the inhaled air and fluids in some portions of the lungs, and also in the stomach and upper part of the intestine. W. A.

A CASE OF TRANSFUSION.—J. Schwarz (*Wiener Med. Presse*, Nos. 51, 52, 1875) reports a case of transfusion of blood, the patient being a hysterical girl. She menstruated for the first time at the age of fifteen, but the flow was always of too small amount, and in the next year symptoms of hysteria of high grade appeared. By persistent loss of sleep and appetite she was reduced to such a degree that death seemed imminent, and one hundred and twenty grammes of blood were injected into the arm. The result was favorable: the patient soon recovered and regained her good health. W. A.

ON THE ANTAGONISM OF PRUSSIC ACID AND ATROPINE (Preyer: *Centralblatt für die Med. Wissenschaften*, No. 52, 1875).—In making these experiments, freshly-prepared solutions of prussic acid (2 parts) and of atropine (1 part) were subcutaneously administered to guinea-pigs and rabbits. The latter solution was sometimes injected into the nasal cavities. The animals were in other respects carefully watched and provided for. It was found that guinea-pigs of an average weight of 600 grm. were without exception speedily killed by the hypodermic use of 0.2 ccm. of the solution of prussic acid, but if they had received some minutes previously 0.5 grm. of the solution of atropine, they usually survived the administration of the acid. The same results were noticed in the experiments upon rabbits, except that they possessed a higher susceptibility to the poisonous effect of the acid. The animals which had been protected from the effects of the first dose of prussic acid by the previous use of the antidote were afterwards killed by the use of the acid alone.

W. A.

A CASE OF ENDOCARDITIS ULCEROSA IN THE PULMONARY ARTERY (Lehmann and Van Deventer: *Berliner Klin. Wochenschrift*, No. 49, 1875).—Ulcerative endocarditis, whether primary or secondary, after pyæmia or septicæmia has almost always been met with on the left side of the heart, and frequently only on the aortic semilunar valves. The present case is therefore of the more interest, as the disease was confined entirely to the valves of the pulmonary artery. The patient was a laborer, aged 46, who stated that eight or nine days previously he had suddenly become ill without any known cause. He had a chill, prolonged by pain in the side and fever, and for some days had expectorated sputa which were tinged with blood. At the time of admission he presented all the objective and subjective symptoms of an acute croupous pneumonia of the right lower lobe, in the stage of resolution. For the first few days after admission the patient improved, but soon his symptoms became more grave. His cough became more severe and caused much suffering, and physical examination revealed the existence of a pleuritic exudation on the right side.

On the 13th of April, three weeks after the entrance of the patient into the hospital, thoracentesis was performed, but all the symptoms grew more severe. The operation was repeated some days later, and a smaller quantity of purulent fluid drawn off. The patient grew steadily worse, and died on the 21st of April with symptoms of collapse, no symptoms whatever of any cardiac affection having been observed. At the post-mortem examination, which was made six hours after death, the heart was found to be enlarged, particularly on the right side, and when it was opened a small quantity of fluid blood flowed out of both ventricles. The mitral and bicus-

pid valves, and also those of the aorta and pulmonary artery, were sufficient. In the aorta and its valves, nothing abnormal was met with. The lumen of the pulmonary artery was greatly obstructed by teat-like masses of fibrin, five in number, which were adherent to the semilunar valves. The valves themselves had preserved their normal form, but were roughened, and on their edges and free surfaces so deeply ulcerated that they were transparent at many points. Their texture was broken down and easily torn. On the inner coat of the pulmonary artery in the immediate neighborhood of the valves were also found ulcerated spots of a grayish-red color, with sharply-defined edges.

W. A.

EAU FIGARO.—Dr. Karl Egger (*Wiener Med. Presse*, No. 7, 1876) analyzed the hair-dye made by the Société d'Hygiène of Paris and known as "Eau Figaro," and found it to be a solution of sulphuret of lead in a solution of alum, which is perfumed with the oil of bergamot. A solution of alum has the power of dissolving a certain amount of freshly-prepared sulphuret of lead, which is again precipitated after some time by the addition of an ethereal oil. This process is apparently facilitated when the solution is thinly spread over an extensive surface; and upon this quality rests the use of the preparation as a hair-dye. W. A.

THE TREATMENT OF OVARIAN CYSTS BY ACUPUNCTURE (Semeleder: *Wiener Med. Presse*, No. 52, 1875).—Two years ago S. learned that a patient who was known to him had been treated by acupuncture in Dresden with good results, and that she had afterwards been subjected to the same treatment in Vienna, by which she was entirely cured. Since that time he has tried this mode of treatment in the following three cases:

1. A virgin, aged 18, with an ovarian cyst on the left side. At the end of four months the circumference of the abdomen had markedly diminished, and at the expiration of two months more the cure was complete.

2. A married woman, aged 24, who had borne two children, presented herself with an ovarian cyst as large as the head of a child aged two years. He reports that this patient was cured at the end of two months, the remains of the tumor forming a hard mass of the size of a small apple.

3. A married woman, aged 42, with an ovarian tumor reaching to the umbilicus. The duration of the treatment in this case was six weeks. In neither of these cases were there any alarming intercurrent symptoms, and there has been no refilling of the cysts noticed. S. thinks that the good effects of the treatment are owing to the property of producing coagulation n albuminous fluids which is manifested at the positive pole of a battery. He thinks that the presence of several cysts is no contra-indication for the employment of acupuncture, and suggests that further experience will possibly show whether this mode of treatment may not be advantageously combined with puncture and the injection of iodine.

Each sitting was of but short duration, and some galvano-caustic action was not always avoided. Similar good results might be obtained from the employment of acupuncture in the treatment of echinococci. W. A.

THE TREATMENT OF RHEUMATIC ARTHRITIS WITH SALICYLIC ACID (Stricker: *Berliner Klin. Wochenschrift*, Nos. 1 and 2, 1876).—All cases of articular rheumatism which have presented themselves at Traube's clinic for some months, in whom the local affections were marked, have been treated with salicylic acid. The pure pulverized acid was given in doses of 0.5–1.00, and the patient in no instance took less than 5.0 or more than 15 grms. daily. The results which were attained were surprising, for all the patients after the lapse of forty-eight hours (the majority of them much sooner) were freed not only from increase of bodily temperature, but also, what is of much more importance, from all local symptoms.

These observations were fourteen in number, and Stricker regards salicylic acid as the most active and perhaps almost a specific remedy for acute articular rheumatism. W. A.

INTERSTITIAL NEPHRITIS—DOUBLE KIDNEY.—At a recent meeting of the Académie de Médecine (*Le Progrès Méd.*, 1876, Jan. 1) MM. Abbadie-Tourné and A. Julien presented notes of a case of nephritis, in which a post-mortem examination showed the kidneys of either side soldered together and bestriding the vertebral column. The examination, made with considerable minuteness, is detailed in full in the report.

X.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 1, 1876.

EDITORIAL.

INTERNATIONAL MEDICAL CONGRESS.

THE Centennial Medical Commission have, after a seemingly long but really unavoidable delay, completed the arrangements for the International Congress, whose sessions are to be held in the hall of the Academic Department of the University of Pennsylvania, commencing the fourth day of September next. The room selected will hold about six hundred people, and the only possible objection to it is that it is not large enough. It was intended to take one of the public halls; but the expense for it and for committee-rooms for the Sections was found to be so great as to stagger the Commission. The neighboring building of the Medical Department and the abundant room in the Academical Department of the University will afford ample accommodations for the numerous Sections, and if, as is after all scarcely probable, the main hall is found too small, the lecture-room of the University Hospital, a few rods away, will contain eight or nine hundred.

The registration fee of the Congress (not required from foreign members) has been fixed at ten dollars, and will entitle the member to a copy of the Transactions.

The addresses before the Congress are to be as follows:

Address on Medicine, by Austin Flint, M.D., Professor of Practice of Medicine in Bellevue Hospital Medical College, New York.

Address on Hygiene and Preventive Medicine, by Henry I. Bowditch, M.D., President of State Board of Health of Massachusetts.

Address on Surgery, by Paul F. Eve, M.D., Professor of Operative and Clinical Surgery in the University of Nashville.

Address on Obstetrics, by Theophilus Parvin, M.D., Professor of Obstetrics in the College of Physicians and Surgeons of Indiana.

Address on Medical Chemistry and Toxicology, by Theodore G. Wormley, M.D., Professor of Chemistry in Starling Medical College, Columbus, Ohio.

Address on Medical Biography, by J. M. Toner, M.D., of Washington, D. C.

Address by Dr. Hermann Lebert, Professor of Clinical Medicine in the University of Breslau.

Address on Medical Education and Medical Institutions, by Nathan S. Davis, M.D., Professor of Principles and Practice of Medicine in Chicago Medical College.

Address on Medical Literature, by Lunsford P. Yandell, M.D., late Professor of Physiology in the University of Louisville.

Address on Mental Hygiene, by John P. Gray, M.D., Superintendent and Physician to the New York State Lunatic Asylum, Utica, New York.

Address on Medical Jurisprudence, by Stanford E. Chaillé, M.D., Professor of Physiology and Pathological Anatomy in the University of Louisiana.

The time of the Sections is to be largely given to discussions upon certain fixed topics. These are to be opened by gentlemen selected for the purpose, who are denominated reporters, and to whom has been issued a circular stating—that the time allotted for the reading of opening papers is thirty minutes each; that, in order to facilitate debate, it is expected that the heads of the various essays will be furnished to the committee of arrangements for publication by the 20th of May; also that at the close of the several papers, the views embodied in them are to be put as conclusions or propositions which can be voted upon separately in the Section, and afterwards reported to the Congress.

The subjects and reporters are as follows:

SECTION I.—MEDICINE.

1st Question. Typho-malarial Fever; is it a Special Type of Fever? Reporter, J. J. Woodward, M.D., Assistant Surgeon U. S. Army.

2d Question. Are Diphtheritic and Pseudo-membranous Croup Identical or Distinct Affections? Reporter, J. Lewis Smith, M.D., Physician to the New York Infants' Hospital.

3d Question. Do the Conditions of Modern Life favor specially the Development of Nervous Diseases? Reporter, Roberts Bartholow, M.D., Professor of the Theory and Practice of Medicine in the Medical College of Ohio.

4th Question. The Influence of High Altitudes on the Progress of Phthisis. Reporter, Charles Denison, M.D., of Denver, Colorado.

SECTION II.—BIOLOGY.

1st Question. Microscopy of the Blood. Reporter, Christopher Johnston, M.D., Professor of Surgery in the University of Maryland.

2d Question. The Excretory Function of the Liver. Reporter, Austin Flint, Jr., M.D., Professor of Physiology in the Bellevue Hospital Medical College, New York.

3d Question. Pathological Histology of Cancer. Reporter, J. W. S. Arnold, M.D., Professor of Physiology in the University of the City of New York.

4th Question. The Mechanism of Joints. Reporter, Harrison Allen, M.D., Professor of Zoology and Comparative Anatomy in the University of Pennsylvania.

SECTION III.—SURGERY.

1st Question. Antiseptic Surgery. Reporter, John T. Hodgen, M.D., Professor of Surgical Anatomy and of Clinical Surgery in the St. Louis Medical College.

2d Question. Medical and Surgical Treatment of Aneurism. Reporter, William H. Van Buren, M.D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Bellevue Hospital Medical College, New York.

3d Question. Treatment of Coxalgia. Reporter, Lewis A. Sayre, M.D., Professor of Orthopædic Surgery and of Clinical Surgery in the Bellevue Hospital Medical College, New York.

4th Question. The Causes and Geographical Distribution of Calculous Diseases. Reporter, Claudius H. Mastin, M.D., of Mobile, Alabama.

SECTION IV.—DERMATOLOGY AND SYPHILOLOGY.

1st Question. Variations in Type and in Prevalence of Disease of the Skin in Different Countries of Equal Civilization. Reporter, James C. White, M.D., Professor of Dermatology in Harvard University.

2d Question. Are Eczema and Psoriasis Local Diseases, or are they Manifestations of Constitutional Disorders? Reporter, Lucius Duncan Bulkley, M.D., of New York.

3d Question. The Virus of Venereal Sores; its Unity or Duality. Reporter, Freeman J. Bumstead, M.D., late Professor of Venereal Diseases at College of Physicians and Surgeons, New York.

4th Question. The Treatment of Syphilis with Special Reference to the Constitutional Remedies appropriate to its various Stages; the Duration of their Use, and the Question of their Continuous or Intermittent Employment. Reporter, E. L. Keyes, M.D., Adjunct Professor of Surgery and Professor of Dermatology in Bellevue Hospital Medical College, New York.

SECTION V.—OBSTETRICS.

1st Question. The Causes and the Treatment of Non-puerperal Hemorrhages of the Womb. Reporter, William H. Byford, M.D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College.

2d Question. The Mechanism of Natural and of Artificial Labor in Narrow Pelves. Reporter, William Goodell, M.D., Clinical Professor of Diseases of Women and of Children in the University of Pennsylvania.

3d Question. The Treatment of Fibroid Tumors of the Uterus. Reporter, Washington L. Atlee, M.D., of Philadelphia.

4th Question. The Nature, Causes, and Prevention of Puerperal Fever. Reporter, William T. Lusk, M.D., Professor of Obstetrics and Diseases of Women and of Children in Bellevue Hospital Medical College, New York.

SECTION VI.—OPHTHALMOLOGY.

1st Question. The Comparative Value of Caustics and Astringents in the Treatment of Diseases of the Conjunctiva, and the Best Mode of Applying them. Reporter, Henry W. Williams, M.D., Professor of Ophthalmology in Harvard University.

2d Question. Tumors of the Optic Nerve. Reporter, Hermann Knapp, M.D., of New York.

3d Question. Orbital Aneurismal Disease and Pulsating Exophthalmia; their Diagno-

sis and Treatment. Reporter, E. Williams, M.D., Professor of Ophthalmology in Miami Medical College of Cincinnati.

4th Question. Are Progressive Myopia and Posterior Staphyloma due to Hereditary Predisposition, or can they be induced by Defects of Refraction, acting through the Influence of the Ciliary Muscle? Reporter, E. G. Loring, M.D., of New York.

SECTION VII.—OTOLOGY.

1st Question. Importance of Treatment of Aural Diseases in their early Stages, especially when arising from the Exanthemata. Reporter, Albert H. Buck, M.D., of New York.

2d Question. What is the Best Mode of Uniform Measurement of Hearing? Reporter, Clarence J. Blake, M.D., Instructor in Otology in Harvard University.

3d Question. In what Percentage of Cases do Artificial Drum-membranes prove of Practical Advantage? Reporter, H. N. Spencer, M.D., of St. Louis.

SECTION VIII.—SANITARY SCIENCE.

1st Question. Disposal and Utilization of Sewage and Refuse. Reporter, John H. Rauch, M.D., late Sanitary Superintendent of Chicago, Ill.

2d Question. Hospital Construction and Ventilation. Reporter, Stephen Smith, M.D., Professor of Orthopædic Surgery in the University of the City of New York.

3d Question. The General Subject of Quarantine, with Particular Reference to Cholera and Yellow Fever. Reporter, J. M. Woodworth, M.D., Supervising Surgeon-General U.S. Marine Hospital Service.

4th Question. The Present Condition of the Evidence concerning "Disease-Germs." Reporter, Thomas E. Satterthwaite, M.D., of New York.

SECTION IX.—MENTAL DISEASES.

1st Question. The Microscopical Study of the Brain. Reporter, Walter H. Kempster, M.D., Physician and Superintendent of Northern Hospital for Insane, Oshkosh, Wisconsin.

2d Question. Responsibility of the Insane for Criminal Acts. Reporter, Isaac Ray, M.D., of Philadelphia.

3d Question. Simulation of Insanity by the Insane. Reporter, C. H. Hughes, M.D., of St. Louis, Mo.

4th Question. The Best Provision for the Chronic Insane. Reporter, C. H. Nichols, M.D., Physician and Superintendent of the Government Hospital for the Insane, Washington, D. C.

Gentlemen intending to make communications upon scientific subjects, or to participate in any of the debates, are requested to notify the Commission before the 1st of August, in order that places may be assigned them on the programme.

The secretaries to whom such communications are to be addressed are:

American Corresponding Secretaries, William Goodell, M.D., 20th and Hamilton Streets; Daniel G. Brinton, M.D., 115 S. 7th Street.

Foreign Corresponding Secretaries, Richard J. Dunglison, M.D., 814 N. 16th Street; R. M. Beftolet, M.D., 113 S. Broad Street.

FEMALE APOTHECARIES.

SOME years since we called attention to the curious oversight of those philanthropists whose mission it is to ameliorate the condition of woman, in that they had made no inroads upon the pharmaceutist. We are glad to learn that there is a prospect of the opening of the pharmaceutical profession to the softer sex, and trust that, before many years, a female clerk in the apothecary's shop will be as familiar a sight as the mortar and pestle in the same locality. The Women's Medical College, we are informed, has commenced to educate women as pharmaceutists, and at the Centennial it is proposed to exhibit a complete series of pharmaceutical preparations of feminine origin. The earnest of important work already given is such that Mrs. Gillespie, President of the Women's Centennial Executive Committee, has obtained an appropriation of five hundred dollars to aid in the completion of the enterprise.

Dr. BURGGRAEVE is stated by the correspondent of the *British Medical Journal* to have inaugurated a new system of therapeutics, — *Thérapeutique dosimétrique*, —

and to have founded a society, which already rejoices in a bulletin. The "new system" consists in the administration of the alkaloids in granules.

THE degree of Doctor of Medicine was conferred upon one hundred and forty-one young men at the recent commencement of the Jefferson Medical College, and upon one hundred and twenty-four at that of the Medical Department of the University of Pennsylvania.

THE survivors of the British Medical Corps of Waterloo are now two in number.

CORRESPONDENCE.

LONDON LETTER.

[From our Special Correspondent.]

THE medical world of London is at present busy with matters ordinary and accidental. The approach of the end of the winter session calls for redoubled attention to class-examinations, not only for the determination of the marks of the different competitors for the class prizes, but, what is even of more importance to the schools, to ascertain how far each of the students who propose to offer themselves to the different examining boards is fit or likely to pass. With the numerous hospitals competing with each other for students, it is a great matter to stand well in the published lists of those passed and rejected at the various examinations. By such means, and by well-advertised scholarships, students are attracted. The activity of the teachers is testified to by the percentage of men passed, and, as matters at present stand, for the bulk of men the choice of a school is not determined by the fitness its teaching confers for actual practice, as much as by the capacity of its teaching staff to pour into the candidates' minds the knowledge which will serve them best at the examination-table. The scandal that the College of Surgeons, the greatest licensing body in the kingdom, did not attempt even to test the knowledge of the examinees as to physiology and to medicine, the latter, of course, being the integral part of their future practice, has been done away with. Nevertheless, there is still too much of the old leaven left, and men are prepared, at least as far as book-learning goes, to ligature the common carotid or perform excision of the hip, operations which will not form their chief occupation in family practice, while their capacity to diagnose measles or to treat a common cold intelligently is extremely doubtful; and what they know of practical medicine is rather gathered from grinding and from manuals than from a more solid personal experience.

As long as each of the eleven hospital schools of London exists, competition must be the order of the day, and the student must be attracted by the most telling forms of allurement.

Such are the usual causes of medical activity at this season. But in addition there is the report of the Commission on Experimentation on Animals, otherwise the Vivisection Committee, just issued, which is attracting much attention. It satisfactorily disposes of the charges of gross and wanton cruelty brought against the profession by the enthusiastic but ill-advised agitators who got up the anti-vivisection movement, aided by certain members of the profession, who thought they saw their way to individual advancement by bringing charges against their professional brethren. It demonstrates that vivisection is practised but by a very few highly-skilled and eminent physiologists, and explodes the impression that the favorite occupation of medical men at their homes is the wanton infliction of pain upon animals merely for the sake of watching their agony, instead of seeking the rest they need or attending to their social duties. So far it sets the public mind at rest, but, of course, lashes the anti-vivisectors into redoubled fury. Foiled in their expectations from a Royal Commission, their monomania is taking the form of hot advertisements, petitions to Parliament, got up by clerical busybodies and signed largely by neuralgic spinsters, tracts of curious character, some of them in verse, and, indeed, all and every means by which they can spread their special opinions. That demoralization of the medical mind, induced by vivisection, which they profess to be one of the great matters to be dreaded, is not shown to exist in reality; and the callousness to suffering assumed to be one of the most certain outcomes of vivisection is not proven as yet to obtain. It is somewhat hard upon scientific men that, after the charges brought against them have been triumphantly refuted, the Commission should, nevertheless, advise licenses, to be withdrawn on proof of abuse, and inspectors to guarantee the public against any wrong-doing. If such measures had any countenance given to them by the evidence tendered before the Commission, it would be another matter, but, under the circumstances, they partake of the character of gratuitous insult. How far the measures to be adopted in the future will stifle scientific inquiry in England, so far as experimentation on live animals is involved, or will tend to protect experimenters from odious misrepresentation and undeserved calumny, it is not possible yet to say.

Another subject of much discussion both public and private is the answer given by the legal advisers of the Royal College of Sur-

geons as to the admission of women to its examination in Midwifery. The word "persons" includes women, and already the vanguard of the ladies' phalanx are knocking at the portal for admission. The well-known perseverance and indomitable energy of these ladies, together with their actual acquaintance with the subject-matter, put the Council of the College in a dilemma. If they must admit them to examination there is but little doubt that the first batches, at least, of the lady students will pass, and probably with credit. The only door of escape lies in severity in the examination, and the Council will scarcely avail themselves of that loophole. But it is not the ladies only who may so make their entrée to the Medical Register, and once there work their way into general practice; it seems probable that the chemists, debarred by a recent decision from counter-practice, will avail themselves of this opportunity of giving themselves a legal foothold. The whole prospect is one scarcely cheering, and the action of the College is keenly watched by the profession at large.

The ladies' school is flourishing, and it is the intention of some of these persevering aspirants to medical knowledge and titles to throw themselves energetically into anatomical, histological, and physiological pursuits, and to demonstrate to the world that woman's equality with man exists in scientific research at least, and so, presumably, in the art of medicine.

Mr. Weston's unprecedented walking achievements are a source of no little interest to the profession, and to physiologists especially. Dr. Pavy is conducting inquiries into the excretion of urea after sustained exertion, and finds, in Mr. Weston's case, the amount very pronouncedly increased. Not only that, but there are found a large number of granular casts,—a fact of much interest.

Another of the profession has been knighted, to the general satisfaction of the profession, Sir Joseph Fayrer receiving this honor while in attendance upon the Prince of Wales in India. The conference of this honor in India is peculiarly graceful, as the recipient is closely connected with India, having borne a notable part in the defence of Lucknow in the mutiny, and more recently having made a series of extensive experiments on the poison of Indian snakes. His work "Thanatophidia, or the Poison Snakes of India," is a magnificent book. Out of the profession Fayrer is a great favorite with Anglo-Indians, and his elevation from a Companion to a Knight of the Star of India is as agreeable to them generally as it is to the profession here.

On the 7th her Majesty makes a royal procession to the East End of London, to open the new wing of the London Hospital. This wing will give two hundred more beds, and bring the whole number of beds up to eight hundred, making "The London" the largest hospital in London. It is a very useful institution away in the East End, with its crowded population, and receives almost all the accidents from the huge docks in its neighborhood. This hospital has a large and excellent staff, and, now that the underground railway arrangements bring it practically so much nearer the West End, will probably, ere long, take its proper position alongside St. Bartholomew's, Guy's, and other leading schools. Probably some honors will be conferred on the occasion, but how far the profession will figure among the recipients rumor sayeth not. Dr. Andrew Clarke, the senior physician, and Mr. Jonathan Hutchinson, the senior surgeon, are both well known for their labors; but probably neither of them is very anxious to receive honors, of which, however, they would be not unworthy.

Dr. Warburton Begbie, of Edinburgh, is dead. This distinguished physician had the largest consulting practice out of London. His father was a consultant of the first rank, and young Begbie, as Warburton was commonly and formally termed, commenced life under the most favorable circumstances. He was a very popular man, and his knowledge of his profession was excelled only by his urbanity.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 13, 1876.

The PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Pericarditis, with fenestration of semilunar valves. By Dr. F. P. HENRY.

THE specimen was removed from a patient (male, æt. 35), who died a few hours after I saw him, at the Episcopal Hospital. He was moribund at the time of his admission, and was suffering from double acute pleurisy, double pneumonia of the lower lobes, and pericarditis, the latter evidently an extension from the inflamed pleura, as the lymph upon the pericardium was much less firmly organized than that upon the pleura. A great portion of it was rubbed off during the handling necessary to the removal of the specimen, but enough remains to show the character of the exudation, its thickness, cohesion, etc.

The heart-walls, on section, were of a dark purple color, with the exception of a much paler layer, about a line in thickness, immediately below the pericardium, which appeared to the naked eye to be the seat of an acute fatty degeneration, such as frequently attends the pericarditic inflammation. I do not affirm that there existed such a degeneration, but merely refer to the contrasts of color presented to the unaided eye.

The specimen, however, at least to my mind, does not derive its chief interest from the pericarditis, which presents nothing more than the appearances attendant upon an acute inflammation of a serous membrane, but from a condition of the semilunar valves of the aorta which may be considered as occupying a border-line between physiology and pathology. I refer to *fenestration*. This condition is treated of in pathological text-books, but only to warn against its being considered other than physiological. It is an approximation towards the type of the auriculo-ventricular valves, and consists in a separation of the free border of the valve from the line of closure. Rindfleisch's admirable description of the condition and its causation renders superfluous any further attempt in that direction.

The valves in this case are believed to have been competent. They were subjected to the water test, but not until after the left ventricle had been opened by a linear incision. To bring the borders of the incision together during the application of the test, it was necessary to make use of some slight pressure, which may have impaired its value.

In this connection it seems apropos to state my belief that none of these tests are conclusive. Frequently, perhaps generally, after death, the heart is contracted; so much so as to render it an extremely difficult matter to distinguish between slight degrees of hypertrophy and muscular contraction. This contraction may undoubtedly assist in the competent closure of the valves.

The researches of Mr. Savory into the anatomy of the semilunar valves, by means of longitudinal sections through the aorta and pulmonary artery and the ventricles, have shown that these valves, instead of being only supported by their line of attachment to the artery, as was formerly taken for granted, also largely derive support on their inferior surface from the muscular wall of the ventricle. Let this wall be thickened by the contraction of the longitudinal and oblique fibres which arise from the borders of the cardiac orifices, and at the same time rendered rigid by the coagulation of the myosin, and it is apparent that the conditions are widely different from those which exist during the closure of the semilunar valves,—that is, during the ventricular diastole.

Until we can imitate the cardiac diastole, this test will remain one of no great delicacy. It should not be relied upon. That we will ever be able to produce an artificial diastole does not seem likely, since it depends upon the elasticity of the muscle, which property is greatly impaired immediately after death, and soon thereafter entirely lost.

Dr. HARRISON ALLEN said that Dr. Pettigrew, in his work on the circulation, calls especial attention to the papillæ and to the spiral fibres running down to the apex of the ventricle and up again, forming a figure "8" or double spiral curve, and places great stress on the influence of the contraction of these fibres on the auriculo-ventricular valve; but he recalled nothing in these papers which would tend to explain this condition of the aortic valves described by Dr. Henry. He thought also that the ordinary mode of applying the hydrostatic test—cutting of the apex of the heart and pouring water into it—was no criterion of the valves' sufficiency, the muscular action of the heart being essential to the fulfilment of all conditions.

Dr. PEPPER said he remembered to have seen it stated that the aortic valves of the shark presented a high degree of fenestration. As to its significance in the human subject, he thought there was room for considerable discussion. The case present is a marked one. He desired to ask Dr. Henry whether there was any evidence of renal disease. He thought the condition of the muscular walls of the heart, in the absence of valvular disease, pointed to renal disease.

Dr. HENRY said that the urine was found loaded with albumen, but that there was no opportunity to make a microscopic examination.

Dr. PEPPER said he thought he had certainly met with these fenestrations more frequently under such circumstances. He thought the condition might be explained on the supposition of a high degree of tension or traction on the valves, under which the size of the valves is gradually increased; and as, in consequence, the fibrous basis-substance of the leaflet becomes deficient towards the free border, the perforation is formed slowly,—an atrophy, as it were, as the result of increased tension. It is not impossible, however, judging from the frequency with which they are mentioned, that the lesser degrees might result from physiological peculiarities of structure.

As to the effect of such lesions on the circulation, it will usually be found that such slits are in the long axis of the valve, running parallel to the free border of the leaflets, so that when the valve is put on the stretch the edges of the fenestra approximate, and hence we would not expect regurgitation even in such extreme degrees of the lesion as here presented.

Dr. C. B. NANCREDE thought the idea of "strain" hardly applicable to Dr. Henry's case. He said that when the valves were closed, the surfaces of the edges of the cusps were in contact for a line or more, and it seemed hardly possible to suppose a strain to be exerted upon these mutually supporting surfaces, unless they were separated, which could only obtain when the fibrous ring to which their bases were attached was likewise dilated. If this were so, we should have insufficiency (which was not found in the present case), as then the corpusculi aurantii would not be sufficient to fill up the space left vacant by the closing of the three semicircular cusps.

Dr. JAMES C. WILSON asked if the clinical histories of the cases in which such transverse fissures were found after death include murmurs of obstruction at the aortic orifice,—whether these marginal loops would be sufficiently free to cause murmur. In this specimen he thought there seemed sufficient relaxation of the upper thread to allow it to float outward and upward from the valve into the blood-stream, in such a way that a systolic murmur might arise.

Dr. HENRY said that, although the heart was not carefully ausculted before death, he thought it evident such a sound could not have been produced, because, if these threads had been thrown into vibration by the blood-current, so as to produce a sound, they would also have been covered with firmly-adherent fibrin, as is the case with threads passed through a vessel in physiological experiments; whereas the most careful examination after death revealed no such condition.

Dr. JAMES TYSON had, since his attention was first called to this condition, lost no opportunity of looking for it, and had examined a number of cases, and was inclined to think that if the view ordinarily taken of the mode of closure of the aortic valves was correct—that is, that not simply their edges were opposed, but the valves themselves for a short distance from the edge—Dr. Nancrede's objection to the idea of the fenestrations being produced by strain was well founded. He was, therefore, inclined to believe that the fenestrations were physiological rather than pathological.

Dr. PEPPER was not aware of any very recent physiological observations which threw any new light on the position assumed by the aortic leaflets when closed and subjected to strong pressure. It had certainly seemed to him that when water is poured into the aorta the leaflets do not assume the position described by Dr. Tyson. But, turning to the results of pathological observation, it was undoubted that in cases of greatly increased arterial tension—as, for instance, in cases of chronic kidney-disease, with consecutive hypertrophy of the heart and enlargement of the orifice of the aorta—the aortic leaflets are frequently found enlarged, with distinct thinning of their free border. There are often no evidences of any inflammatory action about the valves in such cases, and, indeed, it cannot be conceived that any such process—which usually gives rise to contraction and thickening—should produce the changes above described. And considering the relations of the aortic leaflets to the column of blood which they support, and the well-known conditions of hydrostatic pressure, it seemed difficult to conceive of such a position of the valves as would prevent their free borders being exposed in some degree to the increased degree of tension which existed in so many cases. And where such increased tension occurred, it seemed conceivable, and even probable, that it should gradually bring about atrophic perforation near the free border.

It is perfectly true that these fenestrations have been found where there were no clinical evidence of their existence and no associated changes in the heart; but if his memory served him, he had himself more frequently observed them in cases where there had been high arterial tension, and where there were hypertrophy of the left ventricle and enlargement and thinning of the aortic leaflets.

(To be continued.)

REVIEWS AND BOOK NOTICES.

A MANUAL OF GENERAL PATHOLOGY: For the Use of Students and Practitioners of Medicine. By ERNST WAGNER, M.D., Professor of General Pathology and Pathological Anatomy in the University of Leipzig, Director of the Medical Policlinic of Leipzig. Translated from the sixth German edition, by JOHN VAN DUYN, A.M., M.D., Professor of Anatomy and Histology in the Medical School of Syracuse University, N.Y., and E. C. SEGUIN, M.D., Clinical Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons, New York. 8vo, pp. 728. New York: Wm. Wood & Co., 1876.

We are already indebted to Wm. Wood & Co. for translations of most valuable works from the German, in "Stricker's Histology," "Frey on the Microscope," and "Ziemssen's Cyclopædia." They have now added another, in some respects of even greater value, in "Wagner's Pathology," open before us. The first edition of this work was published in March, 1862, and the present is the sixth. The editor of the American edition says truly that "no book in the English language gives such a thorough *résumé* of the elements of medicine."

The work, containing over seven hundred closely-printed pages, is a storehouse of carefully-sifted and well-arranged information in all departments of pathology. In Part First, under *general nosology*, we have articles on the general conception and forms of morbid states, nature of disease, extension of disease, sources of general pathology, general symptomatology and diagnosis, general prognosis, duration of disease, termination of disease by cure and death, agony, apparent death, and causes of death.

In Part Second, *general etiology*, are considered: 1st, internal causes, inheritance, age, etc.; 2d, external causes, including atmospheric influences, the soil, climate, the dwelling, clothing, and bedding, food and drink, occupation, parasites, and contagious miasmata. The article on parasites, covering fifty

pages, includes a description of fungi, bacteria, *et id omne genus*, which gives the long-desired information on this subject of which we have heard so much and learned so little. A perusal of it will qualify the physician to understand the numerous recent publications teeming with the subject.

Part Third, on *general pathological anatomy and physiology*, furnishes an account of local disturbances of the circulation, inflammation, general disturbances of nutrition, including the retrograde metamorphoses,—fatty, lardaceous, colloid, pigmentary, etc.,—progressive metamorphoses, among which are new formations or morbid growths. To the latter over one hundred and fifty pages are devoted. Here, more than anywhere else, do we miss the wood-cuts, of which there is not one in the entire volume, and it is the striking deficiency of the book. We are informed, however, that in Germany it is generally used in connection with Thierfelder's magnificent atlas of Pathological Histology,—Thierfelder being Wagner's assistant,—of which four parts have appeared, covering the respiratory passages and lungs, the liver, pancreas, and salivary glands, the digestive tract, and serous membranes and joints. To English readers, however, this valuable atlas is not easily accessible, the text being in the German, and the plates costly when imported in the usual way.

Part Fourth is on the *pathology of the blood*, two hundred pages, covering anomalies of the size and shape of the corpuscles, anæmia acute and chronic (Addison's disease being included in the latter), changes in the amount of hæmoglobin in the blood, of albumen, of water, excess of fat in the blood, changes in the fibrin, plethora, leucocythæmia, melanæmia, icterus, suffocation, uræmia, diabetes, pyæmia, fever, marasmus, and hemorrhagic diathesis.

In looking over this volume, one is overwhelmed by the evidences it furnishes of extended research and patient labor. Every article is preceded by a copious bibliography, while authorities are liberally inserted. But the research is clearly not that of a mere compiler, but of one practically familiar with his subject,—a practical pathologist,—for such is Wagner. We are informed from private sources that in connection with his position as Professor of Pathology and Pathological Anatomy at Leipsic, he lectures six times a week, spends daily an hour or more at the Pathological Institute, and has moreover the largest consulting practice in Leipsic. It is not surprising, therefore, that his work should be esteemed, as it is in Germany, the accepted text-book. Unlike many translations, the text is lucid and pleasant reading, and the work is altogether one of the most valuable which has been issued in the English language. It will be invaluable to the student of pathology, and should be in every physician's library. J. T.

GLEANINGS FROM EXCHANGES.

RECTO-URETHRAL FISTULA (*New York Medical Journal*, February, 1876).—Dr. E. J. Bermingham reports a case of urethro-rectal fistula, following a prostatic abscess, and cured by paralyzing the sphincter ani and introducing through the sinus a probe coated with fused nitrate of silver. With the ordinary symptoms the only possible malady with which recto-urethral fistula could be confounded is recto-vesical fistula. The points of difference are as follows: In recto-urethral fistula the urine passes by the bowel *only* during the act of micturition, in recto-vesical it may do so *at any time*. In recto-urethral fistula the fæces may pass by the urethra *at any time*, in recto-vesical this occurs *only* during the act of micturition. These points, in connection with the physical examination, will serve to establish a positive diagnosis.

Before we can proceed to intelligently treat this variety of fistula, the cause of the abscess which gave rise to it must be ascertained. Often it is due to stricture of the urethra, and is caused by the urethra behind the stricture becoming ulcerated, some urine escaping into the surrounding parts, there putrefying and giving rise to an abscess. In stricture of the rectum the same thing happens, fecal matter escaping and acting in a manner similar to that of the putrefying urine. In cases of this kind all treatment directed immediately to the fistula would prove unavailing, unless the strictures were first attended to. This should be relieved in one of the usual ways, when the fistula will generally heal without any further interference, especially if it be of recent occurrence. Should it prove obstinate, however, or where no such obstacle as a stricture exists, rest in the recumbent position, opium to keep the bowels quiet, with an enema every few days to clear them, and the daily emptying of the bladder by means of a catheter, will often have the desired effect. When these means fail, the operation done in the case reported should be resorted to, or the galvano-caustic wire might be substituted for the nitrate of silver.

THE DIAGNOSTIC VALUE OF THE ILIO-FEMORAL TRIANGLE IN CASES OF INJURY OF THE HIP-JOINT (*The Lancet*, January 22, 1876).—Mr. Thomas Bryant calls attention to the importance of a triangle which is formed as follows—the patient being in a recumbent position: A line is drawn from the anterior superior spinous process of the ilium to the top of the trochanter major; the second is drawn from the same point directly downwards to the horizontal plane of the recumbent body, and the third is drawn at right angles to the second, and intersects the first at the great trochanter. This last line is the base of the triangle, and is the test-line for fracture or shortening of the neck.

At any rate, Mr. Bryant confidently asserts, after repeated proofs, that in a healthy subject these ilio-femoral triangles are exactly similar upon the two sides of the body, with equal sides and equal angles, and adds, with confidence, that in all cases of injury to the hip in which shortening of the neck of the thigh-bone exists, the amount of shortening can readily and accurately be made out on comparing the bases of the triangles of the two sides; that in impacted fracture of the neck of the thigh-bone, where on the sound side the base of the triangle will, in the adult, measure its average normal length of two and a half inches, on the affected or injured side it will measure from half an inch to more than one inch less,—these measurements being taken with the patient in the horizontal position, the pelvis straight, and the two femora parallel.

Under these circumstances, no case of fracture of the neck of the thigh-bone ought to be overlooked; and in the diagnosis of the case no rough manipulation of the injured limb is ever called for, no looking for crepitus, no forced flexion of the thigh, abduction or rotation,—nothing but the simplest and gentlest manipulation of the part, and a careful measurement; and, moreover, no such blunder as that of mistaking a contused hip for a fractured one ought to be possible.

RARE OBSTETRICAL CASE: PRESENTATION OF FOUR HANDS (*New York Medical Journal*, February, 1876).—Dr. S. C. Stiebeling was called to see a woman, aged 24 years, secundipara. Had been in labor for about five hours. No pains at present. On examination he felt through the bag of waters what later he could discern distinctly as hands. As the os uteri was dilated well enough to allow the introduction of his hand, he resolved to perform version and extraction. On breaking the bag of waters, he met two hands, and going a little higher up in search of a foot he met two more hands. He was puzzled somewhat at first, but soon made up his mind that he had to deal either with a twin case or a monstrosity. Soon he found two heads, one to the right and the other to the left. He now got hold of a foot, brought it down without difficulty, and extracted one child, a boy. The second one was delivered in the same manner, also a boy, both crying lustily.

NEW METHODS IN THE TREATMENT OF EXSTROPHY OF THE BLADDER AND OF ERECTILE TUMORS (*The Boston Medical and Surgical Journal*, January 6, 1876).—Dr. Henry J. Bigelow describes a new operation for the treatment of exstrophy of the bladder. It consists in removing the exposed mucous membrane of the bladder, so that flaps drawn from the adjacent skin may adhere directly to its raw surface.

The usual surgical resource for this sad malformation has been an attempt only to cover the mucous membrane. But it would seem better to obliterate it by the same operation than to form a cavity which is worse than useless because it collects the salts of the urine.

The usual operation also needs a more extended dissection. It requires that a first flap be turned down upon the bladder from above, the object of which is to secure a lining of skin for the new cavity. This flap is covered with two others drawn from the sides and united upon the median line. The denuded surface from which the first flap was taken is then similarly closed by further incisions. By the operation now proposed, both the first flap and the dissection for covering the surface which supplies it are unnecessary. In both operations flaps are best cut where the skin is most relaxed. Hence it is better to include in the incisions the loose integuments of the groin and even of the scrotum. The edges can then be brought together in any direction in which the flaps yield most readily.

In the same paper, Dr. Bigelow details two cases in which erectile tumors of a formidable nature were easily obliterated by the injection, with a subcutaneous syringe, of a few drops of a solution (equal parts by weight) of nitrate of silver in water. If the tissues are firmly compressed about the orifice of the tube, after its introduction, an eschar of the solid tissues is produced, soon enveloped by coagulum adherent from inflammation, with general blood-stasis in the neighborhood. While the eschar thus made is more distinct and firm than that of acid or of the perchloride, the expression of blood probably diminishes the danger of embolism. The ultimate result is abscess and solid cicatrization.

TRANSFUSION (*The Boston Medical and Surgical Journal*, January 27, 1876).—Dr. H. P. Bowditch, after reviewing the experimental work of many physiologists, says,—

As the result of all these investigations, it may be said that the transfusion of animal blood into the human circulation is attended by a certain degree of danger. Human blood, where procurable, should therefore be preferred. In regard to the question of direct or indirect transfusion, it should be borne in mind that one of the chief advantages claimed for the method of direct transfusion from vein to vein over that of injecting defibrinated blood by means of a syringe, is that the blood thus transfused contains all its usual constituents. It is, however, the almost unanimous opinion of investigators of this subject that no difference in the effect, either for good or for evil, is to be found between defibrinated and undefibrinated blood. In view, therefore, of the possibility of the formation of coagula in the tubes used for direct transfusion, and the difficulty of correctly estimating the amount transfused, the indirect method seems upon the whole preferable.

LIGATURE OF THE EXTERNAL ILIAC ARTERY BY AN ANTISEPTIC MATERIAL, FOR THE CURE OF AN UNUSUAL NUMBER OF ANEURISMS.—Oliver Pemberton, F.R.C.S. Ed., reports in the London *Lancet* of February 26 the case of a patient 47 years of age, in whom were present in the same limb three considerable aneurismal tumors,—namely, one beneath Poupart's ligament, one at the apex of Scarpa's space, and one in the popliteal region,—and in whom he tied the external iliac with a carbolized animal ligature. Three weeks after the operation the wound was soundly healed, having for the first fourteen days been treated thoroughly antiseptic, and for the subsequent ones dressed with a resin ointment to remedy some adjacent excoriation. The aneurismal tumors at the time were firm and contracting in dimensions. Gangrene, which had occurred, ended by a well-defined line at the middle of the leg, the dead part being dry, absolutely without putrefaction, under an antiseptic dressing of cotton-wool prepared by saturation in a solution of carbolic acid in ether. The patient was well, and, beyond suffering pain near the line of demarcation, was undisturbed by the death of his foot.

SALICIN IN RHEUMATISM.—Dr. T. Maclagan has used salicin in rheumatism. He employed it in eight cases, and arrives at the following conclusions:

1. We have in salicin a valuable remedy in the treatment of acute rheumatism.

2. The more acute the case, the more marked the benefit produced.

3. In acute cases, its beneficial action is generally apparent within twenty-four, always within forty-eight, hours of its administration in sufficient dose.

4. Given thus at the commencement of the attack, it seems sometimes to arrest the course of the malady as effectively as quinine cures an ague, or ipecacuanha a dysentery.

5. The relief of pain is always one of the earliest effects produced.

6. In acute cases, relief of pain and a fall of temperature generally occur simultaneously.

7. In subacute cases, the pain is sometimes decidedly relieved before the temperature begins to fall; this is especially the case when, as is frequently observed in those of nervous temperament, the pain is proportionally greater than the abnormal rise of temperature.

8. In chronic rheumatism, salicin sometimes does good where other remedies fail; but it also sometimes fails where others do good.

The dose employed was from ten to thirty grains every two, three, or four hours, according to the severity of the case. Fifteen grains every three hours Mr. Pemberton conceives to be a medium dose for an acute case.—*London Lancet.*

POISONING BY CHLORAL HYDRATE.—Mr. E. White reports (London *Lancet*, February 26) a case of recovery after the ingestion of one hundred and ninety grains of chloral. Four hours after taking it, the patient was in a completely comatose state. Respiration 13, stertorous; pulse 120, weak, regular; pupils rather dilated, no reflex action on touching conjunctivæ; extremities cold. Mustard applied to the calves of legs, flipping even to flagellation with a wet towel the face and chest, and strong-smelling salts held to the nostrils, failed to produce the slightest sensibility. He was then aroused by blistering with very strong solution of ammonia, external heat was employed, and whenever the patient relapsed, further application of ammonia to the raw surface never failed to arouse him. Brandy was used freely, but no other remedy.

WHEN WE MAY AND WHEN WE MAY NOT BLEED.—Dr. Henry Moon thinks that the indiscriminate use of blood-letting years ago destroyed many thousand lives annually. In some cases, however, with the light of modern science, it is still a remedy of great practical usefulness. In cerebral hemorrhage, if the impulse of the heart be strong and its sounds loud, if the pulse be regular and no signs of œdema of the lungs exist, the patient should be bled without delay. Here a judicious, timely bleeding may prevent the extension of the paralysis from the cerebrum to the medulla oblongata. The patient may not be bled, on the contrary, when the heart's impulse is weak, the pulse irregular, and rattling in the trachea has already begun. In acute croupous pneumonia bleeding may be beneficial when the pneumonia has attacked a vigorous and hitherto healthy person, the temperature being higher than 100° Fahr., and the pulse rating at more than 120 beats in a minute. In those, however, who are already debilitated, bleeding increases the danger of exhaustion. Should the fever or pneumonia be moderate, venesection is not indicated, even in healthy and vigorous individuals. The result of a bold venesection in fluxion of the lung, arising from excessive cardiac action, is astonishing. As soon as the volume of the blood has become lessened, the pressure diminishes in the arteries, the patients often breathing more freely during the operation. The bloody foam which they were expectorating vanishes, and life may be rescued from the greatest danger by aid of the physician. Bleeding should never be used in cases of long-standing disease of the heart, except under the most pressing circumstances. In endocarditis bleeding is decidedly injurious, yet at times a condition exists, such as overcharge of the pulmonary circulation, threatening œdema of the lungs, when prompt relief by diminution of the blood is called for.—*British Medical Journal*, January 15, 1876.

MISCELLANY.

SIR DUNCAN GIBB, M.D., died of phthisis, on the 16th ult., aged 55 years. Dr. Gibb is widely known in this country by his works on diseases of the throat; but at home he was equally well known by his contributions to science, especially geology and anthropology.

MISS CLARA MARSHALL, M.D., has been elected to the chair of Materia Medica and General Therapeutics in the Women's Medical College, in the place of Dr. Charles H. Thomas, resigned.

DR. PARKES, the author of the most elaborate work on Hygiene in the language, died of chronic pneumonia, March 15, 1876.

NOTES AND QUERIES.

OBITUARY.

DR. JOHN S. PARRY died at Jacksonville, Florida, on the 11th of March, having spent the two previous winters in the South with so much benefit as to lead his friends to entertain hopes of his ultimate recovery. Dr. Parry was born at Druemore, Lancaster County, January, 1843. He graduated at the University of Pennsylvania, Medical Department, in the spring of 1865, and was elected a Resident at the Philadelphia Hospital soon after. In the spring of 1867 he was appointed on the staff of visiting obstetricians to that hospital, which position he held until his death. As a lecturer he was well known, and was peculiarly fitted for the position of clinical teacher by his extensive reading, his wonderful memory, and his extremely accurate powers of diagnosis. During the brief term of his medical career he was a frequent and always valued contributor to the medical journals, his articles possessing great interest, originality, and research. His mind was never at rest, in health or sickness, but was unceasingly occupied with the advancement of medical knowledge. One of the earliest organizers of the Obstetrical Society, he filled its various offices to the satisfaction of all, was ever ready in debate, contributing largely to the interest of its proceedings, and was President of the Society at the time of his death. He was an active member of the College of Physicians and of the Pathological Society; of the latter he was Vice-President. He also held the positions of Physician to the Department for Diseases of Women and Children in the Presbyterian Hospital, and Visiting Surgeon to the State Hospital. In every relation which brought him in contact with his medical brethren, he speedily won their respect and affection, for his unbending and straightforward integrity, his sterling character, and his uniform kindness and courtesy. While prostrated with the disease to which he was so soon to fall a victim, he prepared for the press his work on extra-uterine pregnancy, and edited the American edition of Leishman's "Midwifery," remaining North until the end of December in order to finish the work which he too truly anticipated would be his last. His early death, in his 34th year, will cause a gap in many circles which it will be hard to fill, and he will long be remembered by the many friends and patients to whom he was dear.

THE following resolution was unanimously passed by the Medical Board of the Philadelphia Hospital at a special meeting, held March 16, 1876:

"*Resolved*, That we have received the news of the death of our late colleague, Dr. John S. Parry, with profound sorrow.

"We desire to express our sense of his abilities as a physician and his integrity as a man. We have found him faithful in the performance of duty, both in the wards of the hospital and as Secretary of our Board. As fellow-workers more especially have we noted his directness of purpose, his thirst for knowledge, his indomitable industry. The professional life of Dr. Parry has been so closely identified with the Philadelphia Hospital that we feel that his triumphs have in one sense been our own. We feel a just pride in the widespread reputation he enjoyed, based, as it was, upon researches conducted in that institution. These labors will be his enduring epitaph. Although cut off in the flower of manhood, his name will remain to us an incentive to keep the high trust placed in our hands inviolate, and to use it to noble ends.

"It is further resolved that a copy of this resolution be sent to the family of Dr. Parry, and that it be printed in the medical journals of the city."

TO THE EDITOR OF THE MEDICAL TIMES:

DEAR SIR,—On page 828 of the 25th of September number of the *Medical Times*, appears the following, under the head of Correspondence,—Proceedings of the American Pharmaceutical Association:

"The manufacturers of gelatin-coated pills must have been seriously discomfited at the results arrived at by Professor Joseph P. Remington, of Philadelphia, in his examination of the solubility of the various forms of pills kept upon the shelves of the apothecary. We trust that further investigations may be made on the same subject. He found that gelatin-coated pills were the least soluble of the four forms examined, which, expressed in order of greatest solubility, were the simple uncoated pill, the sugar-coated pill, the compressed form, and the gelatin-coated."

The paper of Professor Remington, from which the above extracts were made, has been replied to by Mr. Samuel Campbell, of Philadelphia, in an article published in the March number of the *Journal of Pharmacy*. He, after carefully conducting a series of experiments by suspending the different forms of pills in water and a solution corresponding with the gastric juice (its digestive power being previously tested by its action on albumen) at a temperature of 100° F. respectively, concludes that, in point of solubility, the compressed pill surpasses all others. Their superior solubility is accounted for from the fact that the compressed pill contains no excipient, but is kept together simply by pressure, while all other forms of pills contain an excipient; that, when exposed to the action of a menstruum, the compressed pill, being porous (which was ascertained by a microscopical examination), absorbs the menstruum like a sponge, while the excipient pill either dissolves from the surface, or the excipient must be displaced before the menstruum can act properly. Mr. C., in his tabulated results, selects those makes of pills which he found by experiment were the best in the market, and representing standard houses, and grades the compressed pill as the first; the U. S. Pharmacopœia, second; the sugar-coated, third, and the gelatin-coated, fourth, in point of solubility. Mr. C. thinks that Professor Remington must really have intended to endorse the compressed pill as the best, for the reason that Prof. R. has represented a machine, by a woodcut at the latter part of his paper, for making compressed pills, which he could not consistently recommend if its production would only be third-rate pills.

Yours, truly,

PILL-DRIVER.

ERRATUM.—At page 269, last paragraph, for 2029 read 227-29.

CHANGE OF HOURS.—The editor of the *Times* will hereafter be at his office until 10 A.M. His afternoon office will, during the coming season, be discontinued. Contributors and others having business with him will please call at his office before 10 A.M.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 12, 1876, *TO MARCH* 25, 1876, *INCLUSIVE.*

MILHAU, J. J., SURGEON.—Leave of absence extended four months. S. O. 49, A. G. O., March 13, 1876.

WEBSTER, W., SURGEON.—Leave of absence extended twenty days. S. O. 49, Military Division of the Atlantic, March 18, 1876.

FORWOOD, WM. H., ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to leave limits of the Department. S. O. 43, Department of Texas, March 11, 1876.

MEACHAM, F., ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 56, A.G.O., March 21, 1876.

ADAIR, G. W., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Richardson, Texas. S. O. 43, C.S., Department of Texas.

MAUS, I. M., ASSISTANT-SURGEON.—When relieved at Nashville, Tenn., by Assistant-Surgeon Greenleaf, assigned to duty as Post-Surgeon at Chattanooga, Tenn. S. O. 39, Department of the South, March 16, 1876.